D4 provided that said composition has a surface resistivity of 10^7 to 10^{13} Ω when measured according to ASTM test method D257.

17. (amended) The antistatic polymer composition of Claim 8 characterized in that plasticizer (D) of the ion conductive polyetherester amide (B) is a plasticizer represented by formula (1)

$$A-O-[CH(X)-(CH_2)_m-O]_n-B \qquad (1)$$

D5 wherein m is an integer of 1-3, n is an integer of 4-25, A is a C_1-C_{10} alkyl, acyl, or aroyl, B is a C_1-C_{10} alkyl, acyl, or aroyl, and X is H, CH_3, or C_2H_5.

18. (amended) The antistatic polymer composition of Claim 8 characterized in that it contains 40.0-98.4 wt% of polymer (A), 1.0-35.0 wt% of ion-conductive polyetherester amide (B), 0.1-15.0 wt% of ion source (C), and 0.5-10.0 wt% of plasticizer (D) with respect to the weight of the composition as a whole.

REMARKS

Claims 1 and 8 have been amended to recite that the component (B) is an ion conductive polyetherester amide, and that the composition has a surface resistivity of 10^7 to 10^{13} Ω. Basis for the new recitation of (B) is original claim 2 and the specification at p. 10, lines 21-22, and basis for the surface resistivity is at p. 14, lines 19-21. Amendment of the other claims simply brings them into conformity with the now amended claims 1 and 8. Claim 7 has been additionally amended to correct some syntax.

General Remarks

Enclosed herewith is a supplemental IDS citing an undated data sheet for Rynite® SST35 NC010, a product of the assignee of this application, E. I. DuPont de Nemours & Co., Inc. This product is believed to have been sold commercially for the last 7 years or more. The Examiner's attention is drawn to the electrical properties section, and specifically the value for the surface resistivity on page 2, which is given as $1x10^{13}$ Ω. The accompanying declaration submitted under 37 CFR 1.132 shows

the surface resistivity of this product is actually $3.7x10^{14}$ Ω. Clearly however the actual measured surface resistivity of this product is much higher (by more than an order of magnitude) than the surface resistivity range given in the current claims 1 and 8.

Claims 1-8 and 10-20 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the phrase "polyether-based" for component (B) of the composition. It is believed this rejection is moot in view of the amendment of claims 1 and 8 to recite ion-conductive polyetherester amide, which is believed by the Applicant to be definite.

Claims 1-5, 7, and 11-15 have been rejected under 35 U.S.C. 103(a) as obvious over Ueda et al. ('098) in view of Mukohyama et al. ('857), and claims 8, 10 and 16-19 also have been rejected under 35 U.S.C. 103(a) as obvious over the same references. Since these two rejections are very similar, and use the same references, they will be answered here together.

In the response to the previous office action which rejected claims 3-4, 7 and 11, and 14-15, over these same references (these responses included here by reference in their entirety) Applicant argued that a *prima facie* case of obviousness had not been established because there was no reason to combine these two references. In an apparent response to this argument, the Examiner states that the compositions of '857 are intrinsically conductive, and that one of average skill in the art would realize this, and presumably because of this there is motivation to combine these two references. In actual fact the compositions of '857 are not intrinsically conductive as defined in the present specification and claims (by surface resistivity). A copolyetherester containing about 1 to about 10 percent by weight soft (polyether) segments is not an ion conducting polymer as these are usually thought of in the art. For such a polymer to be ion conducting a certain minimum amount of polyether must be present in the copolymer. This is known in the art, see for instance M. A. Ratner, et al., Chem. Rev., vol. 88, p. 109-124, at p. 110, right hand column, a copy of which is enclosed. Thus based on the statement at col. 2, lines 19-23, one skilled in the art would <u>not</u> expect that these compositions would be conductive, or at best that their conductivity would be very questionable.

An example of the type of composition described in '857 is Rynite® SST35 NC010, which contains 22% by weight poly(ethylene terephthalate), 25% by weight poly(ethylene terephthalate) containing 8% by weight copolymerized poly(ethylene oxide), 2.6% by weight of a source of sodium ions, 3.6% by weight of polyethylene glycol di-2-ethyl hexanoate and 10.4% by weight toughener, 36% by weight glass fiber, and small amounts of other materials. As mentioned above, this composition, which has all of the essential ingredients of the compositions of '857 except for the brominated flame retardant, is not electrically conductive as presently defined, and has never been advertised by DuPont as an electrically conductive composition. Because this composition has been available to the public before the filing of the present application, those skilled in the art would have known that such a composition was not electrically conductive.

The Examiner also states that "Mukohyama discloses a resin composition that is used in producing parts for the electrical/electronic field. It is well known that antistatic coatings are used to prevent buildup of electric charges that can damage electrical equipment. Thus the disclosure of Mukohyama is relevant to the field of antistatic compositions." It is true that one of the potential uses for the composition of '857 is in electrical equipment. But this by itself does not mean that the composition of '857 is in itself an antistatic (or electrically conductive) composition. In fact, as noted above it is not an antistatic composition. Further, Applicant is puzzled by the reference to antistatic coatings (coatings in this instance are assumed to mean paint-like compositions). None of '098, '857 or the present application deals with antistatic coating compositions. It is respectfully suggested that the fact that any or all of the materials in '098, '857 and the present application, as well as any other object or composition could be coated with an antistatic coating is immaterial to whether these references render the present claims obvious, and whether a *prima facie* case of obviousness has been established.

For the above reasons, a *prima facie* case of obviousness has not been established.

Applicant points out that since a *prima facie* case of obviousness has not been established, as described in the response to the previous office action, an unexpected result has been obtained.

Claims 6 and 20 have been rejected (in separate rejections) under 35 U.S.C. 103(a) over '098 in view of '857, further in view of JP 01163252 ('252). Because these rejections are similar, they too will be answered together.

As the Examiner explains, the '098 and '857 references are applied in the same manner as against claims 1-5, 7, and 11-15 or 8, 10 and 16-19, while the '252 reference "adds" the types of parts which are the subject of present claim 6. For the reasons described immediately above (which are included here by reference), here also a *prima facie* case of obviousness has not been established because there is no reason to combine '098 with '857.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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Dated: 12-18-02

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, deleted material is shown as brackted., and inserted material is shown underlined..

IN THE CLAIMS:

1. (twice amended) An antistatic polymer composition characterized in that it comprises:

(A) one or more polymers selected from the group consisting of polyester, polycarbonate, polyamide, polyoxymethylene, polyphenylene sulfide, and compounds of polyphenylene oxide and polystyrene;

(B) an ion-conductive [polyether-based polymer] polyetherester amide;

(C) an ion source comprising: (i) a source of at least one carboxyl group or sulfo group being selected from the group consisting of hydrocarbon acids containing 6-54 carbon atoms, sulfonic acids and organic polymers with at least one carboxyl group or sulfo group; and (ii) a source of at least one metal ion that is selected from the group consisting of sodium ion, potassium ion, lithium ion, magnesium ion, and zinc ion and that can react with the carboxyl groups or sulfo group of (i) , solid electrolytes or polymer electrolytes ; and

(D) a plasticizer of the aforementioned ion-conductive [polyether-based polymer] polyetherester amide (B);

provided that said composition has a surface resistivity of 10^7 to 10^{13} Ω when measured according to ASTM test method D257.

3. (amended) The antistatic polymer composition of Claim 1 characterized in that plasticizer (D) of the [polyester-system ion-conducting polymer] ion conductive polyetherester amide (B) is a plasticizer represented by formula (1)

$$A-O-\left[\underset{\underset{X}{|}}{CH}-(CH_2)_m-O\right]_n-B \qquad (1)$$

wherein m is an integer of 1-3, n is an integer of 4-25, A is a C_1-C_{10} alkyl, acyl, or aroyl, B is a C_1-C_{10} alkyl, acyl, or aroyl, and X is H, CH_3, or C_2H_5.

4. (amended) The antistatic polymer composition of Claim 1 characterized in that

it contains 40.0-98.4 wt% of polymer (A), 1.0-35.0 wt% of [polyether-system ion-conducting polymer] ion conductive polyetherester amide (B), 0.1-15.0 wt% of ion source (C), and 0.5-10.0 wt% of plasticizer (D) with respect to the weight of the composition as a whole.

7. (amended) A molded article made from the composition of claim 4 [having surface resistivity in the range of 10^{7} to 10^{13} ohms, as measured under ASTM D 257 and being applied] having an electrostatic painting applied directly on a surface thereof.

8. (thrice amended) An antistatic polymer composition characterized in that it comprises:

(A) one or more polymers selected from the group consisting of polyethylene, polypropylene, polypropylene copolymer and EPDM(ethylene/propylene/diene) elastomer;

(B) [a polyether-system ion-conducting polymer] an ion conductive polyetherester amide;

(C) an ion source comprising: (i) a source of at least one carboxyl group or sulfo group being selected from the group consisting of hydrocarbon acids containing 6-54 carbon atoms, sulfonic acids and organic polymers with at least one bonded carboxyl group or sulfo group, and (ii) a source of at least one metal ion that is selected from the group consisting of sodium ion, potassium ion, lithium ion, magnesium ion, and zinc ion and that can react with the carboxyl groups or sulfo group of (i) , solid electrolytes or polymer electrolytes; and

(D) a plasticizer of the aforementioned [polyether-system ion-conducting polymer] ion conductive polyetherester amide (B);

provided that said composition has a surface resistivity of 10^{7} to 10^{13} Ω when measured according to ASTM test method D257.

17. (amended) The antistatic polymer composition of Claim 8 characterized in that plasticizer (D) of the [polyester-system ion-conducting polymer] ion conductive polyetherester amide (B) is a plasticizer represented by formula (1)

$$A-O-\left[\underset{\underset{X}{|}}{CH}-(CH_2)_m-O\right]_n-B \qquad (1)$$

wherein m is an integer of 1-3, n is an integer of 4-25, A is a C_1-C_{10} alkyl, acyl, or aroyl, B is a C_1-C_{10} alkyl, acyl, or aroyl, and X is H, CH_3, or C_2H_5.

18. (amended) The antistatic polymer composition of Claim 8 characterized in that it contains 40.0-98.4 wt% of polymer (A), 1.0-35.0 wt% of ion-conductive [polyether-based polymer] polyetherester amide (B), 0.1-15.0 wt% of ion source (C), and 0.5-10.0 wt% of plasticizer (D) with respect to the weight of the composition as a whole.